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AUTHOR Lynn, David R.
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ABSTRACT

Established in June 1966, the Hawaii Research Coordinating Unit (RCU) terminated under the original Federal grant August 31, 1969. Located in the community college system of The University of Hawaii, the RCU serves all levels of vocational and technical education throughout the state. Among the purposes identified as guidelines for the RCU were: (1) stimulate and generate research, (2) identify research and development needs and implement research efforts, (3) disseminate research information, (4) provide liaison in occupational research, and (5) provide effective Unit administration. Activities contributing to the success of the RCU included: (1) developing personnel resources, (2) implementing limited action type research programs engaging instructional staff, and (3) coordirating effort with the national network of RCUs. Progress, developments, and factors inhibiting achievement of goals have been documented in the 11 quarterly technical progress reports. (Author/JS)

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FINAL REPORT

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Grant No. OEG 4-6-062761-2145

HAWAII VOCATIONAL EDUCATION RESEARCH COORDINATING UNIT

DAVID R. LYNN

University of Hawaii
Hawaii State Community College System
Honolulu, Hawaii 96822

September 1969

U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

Office of Education
Bureau of Research

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HAWAII RESEARCH COORDINATING UNIT[1]
ADVISORY COMMITTEE

Angelo C. Gillie[2]	Coordinator Technical-Vocational Programs Community College System
T. Antoinette Ryan	Professor/Researcher Educational Research and Development Center University of Hawaii
R. W. Lorenzen	Vocational Teacher Trainer Community College System
Theodore F. Ruhig	Executive Secretary State Commission on Manpower and Full Employment
Janet S. Ishikawa	Department Chairman Kapiolani Community College
John Rantala[3]	Program Specialist Vocational-Technical Education Community College System

David R. Lynn, Coordinator
Hawaii Research Coordinating Unit
Community College System
University of Hawaii

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[1]Committee effective October 23, 1968 through August 31, 1969.

[2]Angelo Gillie terminated on April 1969.

[3]John Rantala was appointed to the committee on January 1969.

SUMMARY

The Hawaii Research Coordinating Unit for Vocational Education, established in June 1966 as a continuing three-year (38 months) grant, terminated under the original Federal grant August 31, 1969. Progress, developments and factors inhibiting achievement of goals have been carefully documented in the 11 quarterly technical progress reports.

Nationally, RCUs vary widely. They vary, not so much in terms of their purposes; but in the relative emphasis placed on role and function and resultant accomplishment. These differences, in part, are a reflection of the climate within which the RCU has evolved and is forced to function.

Changing views of the Bureau of Research and prevailing attitudes at the state level regarding vocational-technical education and the perceptions as to the characteristics of research all preclude direction and accomplishment which is reported in this Final Report.

The Hawaii RCU is located in the Community College System, University of Hawaii. It was the decision of project initiators that in this setting the RCU could best serve the total vocational education program in the State. The RCU serves all levels of vocational-technical education throughout the State; however, local support is provided entirely by the Community College System which administers the Unit.

Following the establishment of the Hawaii RCU in June 1966, efforts were initiated to develop operating guidelines. General direction was determined by using the broad objectives for RCUs set forth in the first national meeting of state RCU directors held in Washington, D. C., July 1965. More detailed direction was achieved through meetings and discussions at the local level. These were highlighted by the use of out-of-state consultants which included J. Chester Swanson, Norman C. Harris, and Arthur M. Lee. Initial endeavors also had as a primary objective the communicating to Community College, University of Hawaii, Department of Education, Department of Labor, State Commission on Manpower and Full Employment, and other related agencies the role and function of research in vocational, technical and adult education.

The outcome of initial planning established general purposes of the Hawaii Research Coordinating Unit for Vocational Education as follows:

Purpose 1 was to stimulate and generate research in vocational-technical education and related disciplines.

Purpose 2 was to identify research and development needs; and, to implement research effort in areas of greatest need.

Purpose 3 was to provide liaison in occupational research within the State and on an inter-state basis.

Purpose 4 was to disseminate research information that has been derived within the State and that which has been obtained from regional and national sources.

Purpose 5 was to provide effective Unit administration and structure to accomplish stated purposes.

Since its inception three years ago, the Hawaii RCU has engaged in a multitude of activities in an attempt to accomplish both stated and general purposes. These activities have been reported in considerable detail, as well as inherent inhibiting factors, in the 11 quarterly technical progress reports. Some of these activities included: (a) identification of agencies and persons in agreement with the role and function of the Hawaii RCU and willing to work cooperatively in attaining goals, (b) development of working relationships with various governmental and educational agencies, (c) identifying and bringing to the state competent consultants with special talents to assist in the improvement of existing programs of vocational-technical education, (d) developing personnel resources by planning and requesting a University course in research methods and techniques related to vocational education, (e) increasing awareness of common understandings of lay persons and educators as to the increasing role of research in vocational-technical education, (f) implementing limited action type research programs engaging instructional staff, (g) establishing a resource library of research reports and other related information, (h) coordinating effort with the national network of RCUs, (i) providing assistance to individuals and agencies wanting to engage in vocational-technical education research and providing other consultant activities, (j) establishing RCU linkage with the ERIC Clearinghouse for vocational-technical education and providing user services.

An objective evaluation of attainment of stated RCU objectives was not undertaken locally, but data suggests that Unit purposes for the most part were achieved.

I. INTRODUCTION

A. Background

This is the final report of activities of the Hawaii Research Coordinating Unit for Vocational Education. It covers the Unit's activities through its entire funding period of 38 months.

The Hawaii Research Coordinating Unit for Vocational Education was established with a direct grant for the Bureau of Research, Division of Comprehensive and Vocational Education Research, June 27, 1966, under Research Section 4(c) of the Vocational Education Act of 1963. The project was approved for the three (3) year period from June 27, 1966 through June 30, 1969.

The Vocational Amendments of 1968 provided for the transition of Research Coordinating Units for Vocational Education (RCU's) from USOE Grants under Section 4(c) to State Administration under Part C of the Vocational Education Act as Amended by P. L. 90-576. Recognizing some of the problems inherent in the implementation of new legislation, the USOE provided for the continuation of Hawaii RCU Grant through August 31, 1969.

The local funding requirement was provided entirely by the Hawaii State Community College System.

The major functions of the Unit can be summed up briefly as follows:

> "An agency organized to provide the leadership, motivation, and cooperation needed to create and foster a favorable climate for occupational research and development in the State."

The RCU program is planned as an ancillary service to optimize and supplement, not duplicate, on-going research programs.

The outcome of initial planning established the general long-range purposes of the Hawaii Research Coordinating Unit for Vocational Education. These are identified in following sections of this Final Report.

Historical Development of the RCU. The Vocational Act of 1963 recognized the dearth of research related to vocational-technical education. To alleviate the situation, the Act reserved 10 percent of the vocational funds (P. L. 88-210) allocated to the State to the Division of Adult and Vocational Research 4(c).

To implement the action research needed at the local level, the concept of the RCU's came into being. In 1965, 24 states were invited to submit proposals to establish RCU's under 4(c) funding. In 1966, additional states followed the same procedure, Hawaii was in the second group to be funded. At a later date, Puerto Rico and Alaska were added. A total of 46 units were operational at one time.

The Hawaii Research Coordinating Unit for Vocational Education was organized and functioned as a section of the Hawaii State Community College System. For the major portion of the three-year grant, it functioned under the direction of the Vice President for Community Colleges, University of Hawaii. In the latter months of the Grant, the Hawaii RCU functioned under the direction of the State Director for Vocational Education.

The Hawaii Research Coordinating Unit for Vocational Education has been housed during the entire period of the Grant in the System Office, Community College System, University of Hawaii on the University campus. The State Director for Vocational Education, during the third year of the Grant, was also housed in the System Office. He also functioned under the Vice President for Community Colleges.

This location provided excellent contact with curriculum consultants, program planners, and the State Director for Vocational Education as well as staff and other governmental agencies. The site provided the opportunity for continuous contact with daily events within the System Office and an opportunity to act in direct relationships with the State Director for Vocational-Technical Education.

The Hawaii State Community College System provided the entire required local funding support on the stimulated 10 percent (first year), 25 percent (second year), and 50 percent (third year) during the 38-month Grant without the benefit of 4(a) support.

B. Problem

The Vocational Education Act of 1963 implementing recommendations of the panel of consultants clearly pointed up the urgency of developing quality vocational education programs geared to current and projected employment demands and designed to meet the needs of youth and adults.

The Vocational Education Act of 1963 (P. L. 88-210) carries special provisions [Section 4(a) and 4(c)] to meet the need for developing an integrated, coordinated research and development thrust in vocational-technical education.

For the first time in the fifty year history of the federal involvement in this area of education, specific recognition was given as aspect of program development and implementation which previously had received only token acknowledgement. Never before had vocational education acts spelled out so clearly the need for coordination of efforts on the part of vocational educators everywhere. Never before had there been such a strong focus on the needs of local and state agencies for involvement in coordinated research and development efforts.

Part of the rationale for the research coordinating unit program is stated in terms which recognized that many State Departments of Education were not adequately staffed to assure the conduct of desireable research

and training programs under the 1963 Act and suggested that an appropriate first step would be the establishment of occupational research and development units where productive results could be obtained.

The 1964 budget session of the Hawaii State Legislature requested the Legislative Reference Bureau to study and report on both present and potential vocational-technical education objectives and programs. This study revealed that vocational research was not being implemented in this State.

A cursory review of research activity in the State related to vocational-technical education in the Spring of 1965 supported the findings of the Legislative Reference Bureau study. Researchers found that pertinent research available to the vocational educator was almost nonexistent. Research reports to date had been limited to projection of occupational trends, patterns of growth, and follow-up studies of high school graduates. The University up to 1965 had produced little vocational education research.

For the most part, vocational educators in Hawaii have had to lean heavily on studies that have been made available to them by other governmental agencies and business concerns. In general, these have not met the needs of vocational educators in the State.

Nor was there any apparent support available forthcoming from the State Director's office. The Department of Education was not adequately staffed to assure conduct of desireable research and training programs under the 1963 Act.

It was apparent that there was a need for the establishment of occupational research and development unit to provide an impetus to vocational research in Hawaii.

The establishment of the Hawaii Research Coordinating Unit for Vocational Education and the implementation of the assumptions, upon which the establishment of the Unit was based, is described in this report.

C. Purposes

The Hawaii Research Coordinating Unit for Vocational Education was designed to stimulate research designed to improve existing programs of vocational education. These efforts and activities were guided by the objectives as stated in the original proposal.

The outcome of initial planning established the general purposes of the Hawaii Research Coordinating Unit for Vocational-Technical Education as follows:

Purpose 1 - was to stimulate and generate research in vocational-technical education and related disciplines.

Purpose 2 - was to identify research and development needs; and, to implement research effort in areas of greatest need.

Purpose 3 - was to provide liaison in occupational research within the State and on an inter-state basis.

Purpose 4 - was to disseminate research information that has been derived within the State and that which has been obtained from regional and national sources.

Purpose 5 - was to provide effective Unit administration and structure to accomplish stated purposes.

II. METHOD

A. Unit Organization

The Hawaii Research Coordinating Unit for Vocational Education was organized as an integral part of the administrative structure of the Hawaii State Community College System. The place of the Hawaii RCU in administrative structure of vocational-technical education in the State is described in Appendix A. This chart was updated during the final Grant year to show the transfer of the position State Director for Vocational Education from the Department of Education to the Hawaii State Community College System. (See Appendix B.) For most of the life of the Grant, the RCU Coordinator was responsible primarily to the Vice President for Community Colleges, University of Hawaii who retained the title of RCU Director.

B. Allocation of Staff Resources

In addition to the general guidelines and objectives established, the Hawaii RCU early established supplemental operational criteria as follows:

- The Hawaii RCU was not a research agency per se.
- The Hawaii RCU had as its primary purpose to elicit, encourage, and facilitate the participation of investigators from different disciplines in research having a bearing on vocational-technical education.
- Dissemination of occupational information was a major responsibility.
- Establishing and maintaining an RCU/ERIC linkage as requested by USOE was a related function providing user services.

Throughout the life of the Grant, the Unit was staffed by two full-time persons--a Coordinator and a stenographer. Professional and support functions were intermittent and limited to consultant services and the conduct of short-range research and related projects. A staff summary is described in Appendix C.

On the basis of Unit Organization and operational philosophy staff resources were allocated approximately as follows:

Management--planning, monitoring projects, reporting, liaison, activities, etc.	60%
Identifying and eliciting research.	20%
Dissemination	20%
Training.	5%
Other	5%

C. Advisory Committee

Results of project organization and initial project activity suggested that an advisory group consisting of educators, representatives of related governmental agencies, and others could be of assistance to the Hawaii RCU in providing criteria for research projects, establishing priorities, and the screening of proposals.

In the Fall of 1966, a steering committee was established to provide initial guidelines. This committee consisted of Community College System personnel and representatives from related agencies. (See Appendix D.) This committee met on two occasions but never became truly functional. The unavailability of 4(a) funds for local research, the cut back in 4(c) funding, and the disruption of the administrative structure of vocational education in the State by the then pending transfer of the position of State Director for Vocational Education from the Department of Education to the Community College System were among the reasons for not calling additional meetings of the committee at this time; and the steering committee was eventually de-activated.

Committee members participated in initial series of meetings concerned with the role and function of an RCU in a local setting and assisted in getting the Hawaii RCU operational. These meetings were conducted by Dr. Arthur Lee, Consultant to the Hawaii RCU.

A committee consisting of the Vice President for Community Colleges, the State Director for Vocational Education, and the RCU Coordinator served as an advisory group until the Fall of 1968.

In the Fall of 1968, surplus internal funds were designated as "seed money" for limited research projects; and there was a need for an advisory committee to assist in establishing criteria, priorities, and screening of proposals. At this time a new committee was established which remained active for the balance of the Grant. This committee met regularly during the operating period from October 23, 1968 through August 1969. Minutes detailing activities of the committee meetings were prepared, and they are on file. These committee members are listed in Appendix E.

The Vocational Bulletin No. 288, "Organization and Effective Use of Advisory Committee," published by the U. S. Department of Health, Education, and Welfare, Office of Education, was used as a guideline in establishing the advisory committee. Duties and services the advisory could perform were identified as follows:

1. Identify area of research needed in vocational education.

2. Establish priorities of research activities.

3. Assistance in the screening of research proposals and request for funds.

4. Review of objectives and recommendations as to program emphasis.

D. Operational Plan for Achieving Objectives

The operational plan designed for achieving unit objectives remained essentially as projected in the original proposal Section III ACTIVITIES. Periodic project revision of needs and services added the dissemination function and the responsibility for establishing an RCU/ERIC linkage.

This list of activities outlined in Section III of the proposal proposing methods and procedures to accomplish objectives is shown in Appendix F.

Early project review established from above projected activities five general purposes as follows:

Purpose 1 was to stimulate research in vocational-technical education and related disciplines.

Purpose 2 was to coordinate vocational-technical education research by serving as a "clearinghouse" to avoid duplication of effort.

Purpose 3 was to identify research and development needs and to implement research effort into areas of greatest need.

Purpose 4 was to disseminate research information that has been derived within the state and that which has been obtained from regional and national sources.

Purpose 5 was to provide effective Unit administration and a structure to accomplish RCU long and short range goals.

III. RESULTS

In an attempt to achieve established goals and objectives, the Hawaii Research Coordinating Unit for Vocational Education engaged in a multitude of activities designed to achieve these purposes. Outcomes and activities during the Grant period (June 1966 to August 1969) are reported as accomplishments in achievement of goals.

The following section identifies the established purposes of the Hawaii RCU and provides a summary of exemplary activity which contributed to the attainment of each.

A. Purpose I

To stimulate persons in Hawaii to conduct research in vocational-technical education and in directly related disciplines.

1. Concepts of the Research Function. The RCU functioned as a service agency. One of the principal functions being to stimulate research designed to improve existing programs in vocational-technical education. Hopefully, by developing a research attitude in every educator, particularly at the instructor level, there would be an outcome in the improvement of instruction.

The basic philosophy is that if change and innovation are to be brought about in the instructional program, it has to come from an enthusiastic teacher. Therefore, the focus has been on action research. This approach implies that the research is done by those who face the problem; and, most important, by those who will put the results into effect. It is well known that the greatest problem occurs after the research has been accomplished--the problem of implementation. Present expectations for research in vocational-technical education is that "somewhere and somehow, something has to happen to the student in the classroom."

2. Major Accomplishments and Activities. Specific activities and accomplishments in carrying out this purpose were:

a. The conducting of a statewide research training workshop designed specifically to improve the research competency of instructional staff at the classroom level.

b. The development of a Procedural Guide for providing a systematic approach to the preparation, submission of proposals.

c. The establishment of a liaison with the College of Education, Education Research and Development Center for the purposes of generating research in vocational-technical education by this agency.

d. The stimulation and encouragement of other related agencies to become actively involved in vocational research.

e. The development of an understanding of the goals and function of the RCU and the interests of the U. S. Office of Education, Division of Adult and Vocational Research in generating research in occupational education.

f. The maintenance of frequent communications with staff in the Community Colleges and to stimulate interest in occupational research activity.

g. The identification of graduate students in the College of Education, Department of Curriculum of Instruction, and the Department of Educational Psychology with interests in research projects in business education and industrial education.

3. Significant Events.

a. Research Training. Principles and Techniques of Research in Vocational Education (Ed EP 510) was programmed and conducted by the University of Hawaii summer session.

The course was designed by the RCU for the purpose of developing the research capabilities of administrators and instructional staff. Twenty-one persons enrolled in the course and were representative of administration, business, technical and industrial education personnel.

Instructor for the course was Dr. Irwin L. Spector, Research Director for the Maricopa Junior College District. One phase of the course was the development of preliminary draft of a research proposal by each person enrolled.

b. Research Workshop. The Education Research and Development Center, University of Hawaii (EDRAD) designed for the RCU a "research workshop for vocational educators." The workshop was conducted by Dr. T. A. Ryan of EDRAD as part of the Community College System: "staff institute" on April 18, 1969.

Dr. T. A. Ryan also provided auxiliary support services to staff and teachers by scheduling visits to the community colleges and technical schools of the state for the purpose of discussing research problems and needs.

c. Research by Related Agencies. The Department of Labor, the Commission on Manpower and Full Employment, the Department of Education, and the Community College System during the Grant period engaged in research projects of an institutional nature. The RCU provided consultant services for several of these studies and parti-

cipated in one of the studies. Dealing with manpower needs, drop-out studies and school enrollments, these studies provided an in-put of related research. (See Appendix G.)

d. Liaison with College of Education. Contact was maintained with the Educational Research and Development Center of the College of Education, University of Hawaii. Dr. David Ryans made staff available to the RCU for advisory and consultant purposes. EDRAD staff gave time freely to teachers and other instructional staff formulating research proposals and engaging in vocational research projects.

The Educational Psychology Department, College of Education, identified research needs and implemented research projects by engaging graduate students in research concerned with occupational education. The RCU provided the necessary "seed money" and related support to carry out the projects.

e. Research and Related Projects. The following RCU funded projects were completed and have been disseminated. (Summarized in Appendix H.)

1. Development of Single Concept 8 mm Film Loops

Principal Investigator--Kenneth Okano
Project Monitor---------Donald Lauda

This pilot project was concerned with the practicality of teacher developed 8 mm single concept films as a means of presenting fundamental concepts.

2. Profile Study of Industrial Education Teachers in the State of Hawaii

Principal Investigator--Madelyn D'Enbeau
Project Monitor---------Marvin Poyzer

This study was an attempt to identify occupational education teachers in the State and to determine qualifications and needs for in-service teacher education programs.

3. Concepts of Career Fields Held by 11th Grade Students

Principal Investigator--Donald Leton
Research Assistant------Carol Dodd

The purpose of this study was to determine students' concepts of career and to assess the reality or unreality of the concepts in terms of their own needs.

4. Aptitude Characteristics of Students in Community College Vocational Curricula

Principal Investigator--Donald Leton
Research Assistant------Richard Costa

The objectives of this study were to establish vocational curriculum patterns and determine the aptitude characteristics of students in specific vocational curricula. High school counselors will find a comparison of scores obtained by students intending to enter vocational curricula with profiles obtained in this study to be useful.

5. Training Activities within Business-Industry: Implications for Public Education in Hawaii

Principal Investigators--David Lynn/John Nothom

The purpose of this study was to identify the nature and scope of training being conducted within business-industry and to examine expectations for public education. It is expected that the information gathered will be of assistance in the development of coordinated manpower programs.

6. A Research Model to Identify Mathematical Tasks Performed by a Representative Sample of Bookkeepers and Account Clerks in Honolulu Business Firms

Principal Investigator--Janet Ishikawa

The purpose of this project was to test a procedure for gathering data to determine what mathematics to include in a mathematics curriculum for business education students seeking employment in office occupations. Procedures were designed to identify tasks performed and skills and knowledges required.

B. Purpose II

To provide liaison in occupational research within the State and on an interstate basis.

1. Concepts of Liaison Activity. A primary function of the Hawaii Research Coordinating Unit for Vocational Education was to act as coordinator of research activity in vocational-technical education. The role of the RCU has been to optimize and supplement, not duplicate, on-going research programs in manpower and other related institutional research.

Emphasis was directed toward developing a statewide cooperative effort related to the need for and the implementation of vocational research.

2. Major Accomplishments and Activities. Specific activities and accomplishments in carrying out this purpose were:

a. The attendance and participation in meetings of various State and National agencies.

b. The coordination of vocational education research activities by maintaining lines of communication with other Research Coordinating Units, Region IX, U. S. Office of Education, and other State Departments of Education.

c. The maintenance of a liaison with the Education, Research and Development Center and the Department of Educational Psychology, College of Education, University of Hawaii.

d. The maintenance of contact with the State Department of Labor, Research and Statistics Department.

e. The dissemination of information regarding local and national research to educators and related agencies throughout the State.

f. The establishment of a working relationship with the State Commission on Manpower and Full Employment in seeking answers to manpower problems.

3. Significant Events. A major effort was made during the second quarter to establish and maintain working relationships with agencies, institutions, and organizations which are concerned with research, employment, human resources and education.

a. Related Research Organizations. Hawaii has multiple organizations concerned with these areas directly related to vocational and technical education. The following are some of the agencies active in this broad area with whom the Hawaii RCU has been in contact:

1. Honolulu Chamber of Commerce-Committee on Vocational Education.

2. Governor's Commission on Manpower and Full Employment.

3. Hawaii Vocational Rehabilitation Plan-State of Hawaii.

4. State of Hawaii Department of Planning and Economic Development.

5. Education Research and Development Center-College of Education, University of Hawaii.

6. Department of Educational Psychology-College of Education, University of Hawaii.

7. Economic Research Center-University of Hawaii.

8. Department of Curriculum and Instruction-College of Education, University of Hawaii.

9. Hawaii Curriculum Center-University of Hawaii-Department of Education.

10. Bureau of Research and Statistics-Department of Education.

11. Department of Education-State of Hawaii.

12. Community College System-State of Hawaii.

13. State Director of Vocational, Adult and Post-High School Education.

14. Legislative Reference Bureau-University of Hawaii.

b. Accelerated Inter-agency Relationships by Technical Assistance. To accelerate inter-agency relationships and to develop understanding of the RCU and more specifically the role and function of the Hawaii RCU, Dr. Arthur Lee, Director of the Arizona RCU, was engaged as a consultant. Hawaii, although sophisticated in the area of research with many on-going programs, does experience a "time lag." Inspite of telephone service and good transportation to the mainland United States, Hawaii nevertheless is isolated in day-to-day contacts with persons engaged in similar activity. Bringing to Hawaii the two-year operating experience of a successful RCU was viewed as a practical approach toward accelerating occupational research in Hawaii.

c. Structured RCU-Agency Conferences. A series of successful conferences, both group and individual, were set up with specific objectives. These involved the following persons:

1. Conference "A"--Albert J. Feirer, State Director of Vocational Education; Arthur Lee, Consultant, Director of Arizona RCU.

2. Conference "B"--Richard Kosaki, Vice President for Community Colleges, University of Hawaii; Arthur Lee, Consultant.

3. Conference "C"--Donald Bridgman, Community College System; David R. Lynn; Donald Aten, Education Research and Development Center, University of Hawaii; Arthur Lee, Consultant.

4. Conference "D"--Honolulu Chamber of Commerce-Vocational Education Committee; Arthur Lee, Consultant.

5. Conference "E"--Governor's Commission on Manpower and Full Employment; Arthur Lee, Consultant.

6. Conference "F"--Lowell Jackson, Superintendent, Department of Education; Robert Loveless, Board of Education; Arthur Lee, Consultant.

7. Conference "G"--Theodore Ruhig, Commission on Manpower and Full Employment, Teruo Yoshida, Department of Labor & Industrial Relations, State of Hawaii; Richard Kosaki, Community College System; Donald Bridgman, Community College System; Donald Aten, Education Research and Development Center, University of Hawaii; David Lynn, Hawaii RCU; Donald Leton, Education Research and Development Center, University of Hawaii; Yukie Gross, School of Nursing, University of Hawaii; Robert Potter, College of Education, University of Hawaii; William Savard, Department of Education; Marvin Poyzer, College of Education, University of Hawaii.

8. Conference "H"--Janet Ishikawa, Kapiolani Community College; Harriet Nakamoto, Kapiolani Community College; John Nothom, Honolulu Community College; Arthur Oswald, Honolulu Community College; Esme Chu, Commission on Manpower and Full Employment; Jessie Sato, University High School; Mildred Kosaki, University of Hawaii Institutional Research Office; Cynthia Barnes, School of Nursing, University of Hawaii; Herbert Halberg, Honolulu Community College.

d. Region IX Relationships. Continuous contact was maintained with Walter Hirsch, Director of Educational Research, Region IX, Department of Health, Education, and Welfare. On two occasions, Hawaii RCU staff members met with Dr. Hirsch in the San Francisco offices of Region IX regarding research proposals and fundings. Dr. Hirsch assisted the Hawaii RCU by providing copies of abstracts of all proposals which had been funded in Region IX that provided direction and guidelines to local proposal development.

Prior to termination of the Grant, Region IX had pending a research proposal establishing a research training program in Hawaii. Hopefully, this will materialize during the ensuing year.

Throughout the Grant, the Director of Educational Research, Region IX, promoted an active interest and participation on the part of all RCUs in the products and processes of the Regional Research Program of the USOE.

e. Major Regional and Local Meetings. Hawaii Research Coordinating Unit personnel participated in local and national conferences that would assist in accomplishing the purposes of the organization. One staff member was in attendance at each of the following major meetings:

1. Western States Regional Conference of RCU Personnel, Flagstaff, Arizona, November 18-19, 1965.

2. National Conference of Directors of State Vocational Education Research Coordinating Units, Washington, D. C., September 20-22, 1966.

3. The Governor's Conference on Human Resources, Honolulu, Hawaii, February 1-2, 1966.

4. Western Regional Research Coordinating Unit Conference, Phoenix, Arizona, December 16-17, 1966.

5. Region IX Adult and Vocational Education Conference, Long Beach, California, April 11-13, 1967.

6. National Conference on the Diffusion of Educational Ideas, East Lansing, Michigan, March 26-28, 1968.

7. Western Regional Research Coordinating Unit Conference, Las Vegas, Nevada, April 25-26, 1968.

8. Fourth National Research Coordinating Unit Conference, Salt Lake City, Utah, May 25-27, 1969.

9. National Institute for Improving Vocational Education Evaluation, Fayetteville, Arkansas, August 4-8, 1969.

10. Western Regional Research Coordinating Unit Conference, Seattle, Washington, August 26-28, 1969.

C. Purpose III

To identify research and development needs and to encourage research effort in areas of greatest need.

1. Concepts of Approaches to this Objective. A criteria was that one of the major responsibilities of the Hawaii Research Coordinating Unit for Vocational Education was that of identifying and isolating needed research in vocational-technical education and that an effort should be made to implement research in the target areas identified.

For reasons reported in Quarterly Technical Progress Reports, the Hawaii RCU early realized that if research and studies related to vocational-technical education were to be accomplished such research would have to be RCU implemented and funded.

2. Major Accomplishments and Activities. Specific activities and accomplishments in carrying out this purpose were:

a. The establishment of broad research goals in occupational education for the State of Hawaii.

D. Purpose IV

To disseminate research information that has been derived within the State and that has been obtained from regional and national sources. And, the carrying out of the RCU/ERIC linkage function.

1. Concepts of the Dissemination Function. From the early beginnings, the U. S. Office, Division of Adult and Vocational Research, considered dissemination one of the major related functions of the RCUs. It is in this area that perhaps the Hawaii RCU has been most active and of the greatest service.

2. Major Accomplishments and Activities.

a. The placement of a standing order for all ERIC Microfiche reports cited in the monthly issues of Research in Education (RIE).

b. The establishment of procedures by which schools, colleges, and other agencies may request and borrow microfiche documents.

c. The informing of the vocational-technical education community of the new information tools available to the profession as the result of ERIC Clearinghouse activities. These tools include RIE and AIM/ARM publications.

d. The processing of "fugitive" materials for dissemination such as re-prints of journal articles pertaining to vocational-technical education, excerpts from "trade" magazines, copies of news releases, and copies of other pertinent information being circulated in the RCU national network.

e. The development of a mailing list of persons in the State concerned with vocational education. List to include administrators, high school counselors, a variety of state agencies, employees, education council members, labor and management committees, industrial relations officers, etc., in the State.

f. The dissemination of a flyer specifically outlining how the RCU can be of service to the classroom teacher and how he may function as a researcher in occupational education.

g. The dissemination of reports and other materials explaining the role and function of the Hawaii RCU in the State.

h. The providing of technical assistance and support to the "Vocational Beacon" which provided a media for disseminating vocational information throughout the State.

3. Significant Events.

a. Library. Since its establishment, the Hawaii RCU has devoted considerable time to collecting and organizing a library of vocational materials. Much of this has come about by being part of the national RCU network of dissemination. Although limited, the Hawaii RCU has on file bibliographies, research reports, U. S. Office of Education releases and other current information on vocational-technical education. The acquisitions now make up one of the most valuable and comprehensive collection of current information on vocational-technical education available in the State.

Graduate students, various state agencies, educators and other interested persons are constantly drawing upon the materials. Over 280 documents have been out on loan at one time or another.

b. ERIC Workshop. Dr. Lawrence Zane, part-time RCU staff member, reviewed the intricacies of the ERIC system and prepared a "Lesson Outline: Familiarization with ERIC and Its Publications." This resource material was used to support a series of two-hour workshops scheduled in the four community colleges and one vocational-technical school in the State. The workshop was aimed primarily at vocational-technical educators, administrators, and guidance personnel. The presentation provided for extensive use of overhead projectuals and the hook and loop board. Practical application was provided by planned exercises in the use of Research in Education and the use of microfiche readers and printers. Copies of the prepared Lesson Outline were supplied to the RCU network and to ERIC.

c. Dissemination Activities. An increased effort has been made to get pertinent information out to administrators and staff concerned with programs of vocational-technical education. A total of seven "Information Releases" have been published and sent to a list of over 100 educators in the State. These releases have been concerned, for the most part, with calling attention to acquisitions of the RCU resource library.

Graduate students, lay persons, and governmental agencies concerned with vocational-technical education have drawn upon the accumulation of research reports, pamphlets and other documents on file from time to time.

The RCU staff screens and reviews incoming materials and reports known to be of particular interest to individuals are forwarded directly to them for information purposes. These individuals include university teacher trainers, vocational administrators, teachers and other interested persons and agencies. (See Appendix I).

The following are examples of materials which have been distributed state-wide during one operating quarter via the new mailing procedures:

1. ANNOUNCEMENT - You and ERIC (Flyer)

2. Bibliography III - Hawaii RCU, December 1968

3. ERIC Microfiche Document Order Form (For drawing documents from RCU library)

4. AIM & ARM - Information Material for You (Brochure)

5. COMPACT (An issue on vocational education)

6. Quarterly Technical Progress Report

d. "Vocational Beacon." The "Vocational Beacon" is prepared and edited by John Rantala of the State Director's Office and has as its objective the provision of better communication and information channels for all interested in occupational education in the State of Hawaii. The publication of the "Beacon" signals a renewed emphasis on vocational education in Hawaii. There have been six issues of the "Beacon" since the first publication on March 15, 1969.

Although not an RCU publication, the RCU is actively involved in each publication and uses the "Beacon" as a media to further RCU objectives--ERIC announcements, publications available, completed research, etc.

Feedback and response to articles and announcements in the "Beacon" has been most rewarding. The initial circulation of 500 copies had climbed to the present circulation of 1,000.

E. Purpose V

To provide effective Unit administration and development to reach RCU long- and short-range goals.

1. Concepts of Effective Unit Administration. Unit administration was guided by the general purposes established for the Unit. In addition to these general guidelines, the Unit operations were guided by related criteria. These were:

a. RCUs are not a research agency per se.

b. Survey and data collecting are State functions.

c. The State Director is the key man to RCU operations.

b. The development of a list of critical areas and special research needs.

c. The establishment of a "review committee" to review incoming proposals for local and Federal funding using criteria to be established. (Advisory Committee served.)

d. The identification of one person on each Community College campus and one at the Hawaii Technical School to serve as an affiliate to the RCU in promoting the objectives of the RCU at the school level.

e. Assistance to staff in identifying critical research needs and establishing research prioties.

f. The dissemination to staff and other exemplary proposals and lists of project funding at national and local levels as guidelines to research.

g. The evaluation of on-going or completed vocational projects.

h. The implementation and monitoring of research and related projects.

3. Significant Events. The Hawaii RCU staff and supporting committee continually probed, explored, and examined areas where critical research was needed. The State Director, civic organizations, consultants, and others participated in an effort to sift out and assign priorities to major research deemed desireable to make a significant contribution to vocational-technical education in the State.

a. Research Seminar. The Hawaii RCU and the State Commission on Manpower and Full Employment jointly sponsored and conducted a one-day conference aimed at identifying significant problems related to manpower and vocational education.

The seminar was supported by consultants who assisted in structuring the conference and providing section leadership. Consultants contributed to pre-seminar planning and to follow-up report writing in addition to participating in the seminar.

The State Commission on Manpower and Full Employment provided the services of Dr. Sidney Fine, W. E. Upjohn Institute for Employment Research, Washington, D. C.; and the Hawaii RCU provided the services of Dr. Sidney High, Division of Adult and Vocational Research, U. S. Department of Health, Education, and Welfare, Washington, D. C.

One of the most significant outcomes of the seminar was the development of an awareness on the part of legislators,

educators, and leaders of business and industry as to the needs of research activity in the area of manpower and vocational-technical education.

The "Problem Statements" and other information generated during the seminar now provide guidelines to research activity in the State and with refinement can be developed into a state master plan for research and development in vocational education.

The proceedings of the seminar are reported in the document "Research Problems in Manpower and Vocational Education." A list of persons participating are reported in Appendix J.

4. Proposals Submitted. During the Grant period staff and administrators were encouraged to identify research needs and submit proposals through appropriate channels for funding from selected sources.

The uncertainty of funds to support vocational research projects within the State proved to be a major deterrent and limited the number of research proposals. Staff, administrators, and related researchers were only encouraged to submit proposals to funding sources where there was some possibility of project approval. Most research activity was thus confined to "in-house" funding by the Hawaii RCU.

A list of proposals submitted to the Hawaii RCU or developed by the RCU and related staff is reported in Appendix K.

5. Evaluation. The Hawaii RCU staff prior to the termination of the Grant participated in two national institutes concerned with program evaluation and follow-up studies. Initial steps have been taken to initiate a statewide follow-up program of students exiting the occupational training programs in the State. The Honolulu Community College is working in cooperation with RCU personnel in establishing a pilot program.

6. Advisory Committee. An effective advisory committee to assist in the identification of needed research and the screening of proposals was functioning on termination of the Grant. The function and services of this committee are discussed elsewhere in this report. See Appendix D for a list of committee members.

d. Research in vocational-technical education should be a cooperative effort between business, industry, and universities, and the State Employment Service.

e. Financial support for research should be based on a broad scope involving Department of Education, business-industry, the University, private foundations, the State Government, and Federal Government.

f. A primary purpose is to elicit, encourage, and facilitate the participation of investigators from different disciplines that have a bearing on vocational-technical education such as sociology, economics, psychology, and labor market analysis.

The services of the Hawaii RCU staff were conceived to be that of a management nature, for the most part, with responsibility for "cause and effect."

In view of the role and function established for the Hawaii RCU, staffing needs were considered minimal. Essentially, all operations during the Grant period were conducted by the Coordinator and one stenographer. Supplemental staffing was provided on an intermittent basis. Appendix C reports staffing during the Grant period.

2. Major Accomplishments and Activities. Specific activities and accomplishments to carry out this purpose were:

a. The establishment of the RCU as an integral part of the structure of vocational education in Hawaii with particular emphasis in relating directly to the State Director for Vocational-Technical Education in the new organizational structure.

b. The continuous effort by professional staff members to keep informed of recent developments in vocational education by attending meetings, seminars, participating in national regional institutes, and reviewing current literature.

c. The delineation of operational procedures and practices.

d. The searching for professional, non-professional personnel qualified and interested in providing intermittent services for the RCU.

e. The studying of new legislation in regard to implications for occupational research and funding provisions.

f. The preparation of Quarterly Technical Progress Reports and the Final Report.

g. The preparation of annual budgets and accounting for expenditures.

h. The identification of staff members of the Community College System interested in providing service to the RCU on released time.

i. The establishment of a steering committee and an advisory committee.

j. The purchase of equipment and supplies to provide for an effective operation.

3. Significant Events.

a. Location and Sphere of Operation. The decision to establish the Hawaii RCU in the Community College System is singled out as a significant accomplishment. Operating under the "umbrella" of the University of Hawaii in a setting of a system of comprehensive community colleges provided many advantages.

The Unit was located within a community college system (five colleges) directly concerned and active in providing an estimated 80 percent of all the pre-employment occupational training programs in the State. The development of new programs to meet changing needs is almost totally a responsibility of this system.

The University setting provided numerous advantages. Available to the RCU were facilities and personnel that facilitated operations. The Personnel Office provided the mechanics for employing and payment of research assistants and other related personnel employed on demand; the Community College System Office handled all accounting and provided monthly expenditure reports; reproduction services were readily available; design services and publication assistance was provided by the Office of University Relations and Development; the Education Research and Development Center of the College of Education provided consultant and staff services.

The above and many other services were available to assist the RCU in accomplishment of purposes. In any other setting at the present time, the RCU would not have been effective.

b. Legislation. Senator Eureka Forbes introduced Senate Bill 1148 into the Fourth Legislature, 1967, State of Hawaii. The Bill appropriated out the general revenue of the State of Hawaii the sum of $50,000 for research, training, pilot, and demonstration projects and programs development related to vocational-technical education. The Bill, in addition, specified that the sum appropriated shall be expended for the purposes herein specified by the Hawaii Research Coordinating Unit for Vocational Education.

The Bill received little support and was filed by Committee action. See Appendix L.

c. Reporting. Eleven Quarterly Technical Progress Reports were completed and forwarded to the U. S. Office of Education. In addition, these were distributed nationally and locally. These reports included "organization charts" showing the location of the RCU in the educational organizational scheme of the State. In addition, an "Interim Report" was prepared in September 1968 which in considerable detail spellec out the role and function of the RCU and presented by graphic representation a "Prototype RCU Unit for Hawaii." See Appendix M.

d. Capital Equipment Acquisitions. Equipment purchases were limited to items necessary to make the Unit functional in its early stages of development. Equipment purchases are listed in Appendix N.

e. Advisory Committee. An advisory committee was incorporated into the administrative structure of the Hawaii Research Coordinating Unit for Vocational Education. It is discussed in other sections of this Final Report and the activities or contributions of the committee are not reported under this heading.

IV. DISCUSSION

The preceding sections of this Final Report present a summary of the services and activities of the Hawaii Research Coordinating Unit for Vocational Education. These capsule items, which have taken place in the last 38 months, are the fledgling accomplishments of the still developing vocational education research unit. The Unit makes no claim of fully accomplishing its role as a "change agent" and being able to present visible evidence of having had an impact on vocational programs in Hawaii.

However, in all fairness, progress should be measured in light of the difficulty of the problems attached to the implementation of a research program in vocational education. The project staff are of the opinion that it might take years to establish an effective program of vocational research, which would be able to bring about change and innovation in the vocational-instructional program of the State. One educator referred to the program as "one of the most difficult programs in the State to implement."

Although this report points to accomplishments of the Unit, the report would not be complete without briefly reviewing some of the problems which prevented the Unit from either partially or fully meeting established objectives.

As recorded in the past Quarterly Technical Progress Reports, the Hawaii RCU constantly faced a number of problems, which were discussed under the general heading "Problems." These have been summarized under the following headings:

- Adverse Operational Climate
- Limited Unit Staffing
- Lack of Research Funds
- Absence of Research Capabilities

1. Adverse Operational Climate. The RCU, to some degree, can direct its course of action; but in a larger, more practical sense, the RCU does not have complete determination. There are national and local currents which inevitably affect its course of action.

The Hawaii RCU emerged during a period in which vocational-technical education was a major topic of concern in the State; and during the Grant period, revolutionary changes were made in the structure of vocational education in the State. Notable was the Board of Education (K-12) resolution which, in effect, placed the responsibility for all vocational education on the post-high school program - the Community College System. This included the transfer of all financial and accounting responsibility and the dismembering of the on-going administrative and supervisory structure for vocational education in the State. The Office of the State Director for Vocational Education under the Department of Education was gradually

phased out, and only in the last six months of the Grant did the new State Director for Vocational Education become functional under the Community College System.

Early in 1969, the Board of Education (K-12) ceased to act as the Board for Vocational Education, and the responsibility was transferred to the Board of Regents, University of Hawaii. A State Vocational Education Coordinating Advisory Council was established; and more recently, a State Advisory Council on Vocational and Technical Education has become operational.

Operating in a transitional climate where, with an on-going administrative structure being dissolved and a new one still in the developmental stage, the RCU was confronted with serious operational handicaps.

2. Limited Unit Staffing. Inadequate staffing was a factor to the Unit's productivity, which was somewhat less than hoped for initially. The Unit was a "one man" operation - a full-time coordinator and secretary. There were more demands than time to fulfill objectives - particularly in the areas of communication and planning. Attempts to involve others on a part-time basis in supporting activities were not too successful. It is difficult for part-time staff assistants to accept and share responsibility. The Coordinator tended to be engulfed by the chores which seem to be always present - correspondence, report writing, responding to inquiries, reviewing literature and incoming reports, participating in seminars and conferences.

Fractional time staff, although invaluable when functioning in an advisory status, do not always contribute to accomplishment of the on-going day-to-day objectives of the RCU.

3. Lack of Research Funds. Sufficient funding to support research was considered a major deterrent to the accomplishment of major research related to vocational-technical education in the State of Hawaii. The Hawaii RCU, established in the "second increment" of a nation-wide system of RCUs in 1966, immediately faced a situation in which there was a general unavailability of 4(c) funds during the initial fiscal year. This precluded the Hawaii RCUs engaging in activities to stimulate research designed to improve existing programs in vocational-technical education.

To compound the issue, 4(a) funds at the local level were unidentifiable and unavailable to the RCU.

The absence of funds prevented the RCU from developing needed major research and meeting the greater need for which the RCUs were created.

It was apparent that significant local funds are not going to be generated in the immediate future to encourage and permit researchers to engage in major studies relevant to vocational education. Until such time that major funding is available, the Hawaii

RCU must continue activities at the current level rather than attempt to expand. (See Appendix O.)

The present policy of limited studies to be supplemented by staff "in-house" research projects appears to be the extent of the engagement in research for the time being. It is unfortunate, as vocational-technical education is in a crucial stage in Hawaii with educational institutions seeking data, information and criteria upon which to base decisions.

4. Absence of Research Capabilities. The lack of research expertise became apparent when the RCU attempted to involve instructional staff in research projects. The basic philosophy here was that if change and innovation were to come about in the instructional program, it had to come from an enthusiastic teacher.

Staff involvement in bringing about curriculum change has been questioned by some, as the process is an extremely slow one. This was found to be true; but in addition, the few exploratory projects assigned to the staff during the Grant period were disappointing in terms of professional accomplishment. This revealed the need for developing seminars and workshops in research technology.

Discussions with teaching staff throughout the State indicated considerable interest in research and related projects concerned with vocational education. The study, "Survey of Occupational and Certain Related Educator in the State of Hawaii," revealed a great number of specific interests. However, further contact with the staff and the results of several pilot projects revealed a lack of understanding of the research process and the necessary background to accomplish the desired results.

At the University level, there was little interest on the part of researchers and others to contribute to vocational-technical education. Programs relating to vocational-technical education at the University level are only "existing." The industrial arts teacher training program was discontinued for a time and eventually re-established on a limited basis. Several of the existing technical programs are being transferred from the University to the Community College System. The Hawaii Curriculum Center, Title III, a joint project of the College of Education and the Department of Education, is presently concerned with innovation in academic studies at the elementary and secondary levels.

The trend is greater emphasis on academic aspects of education at K-12 level and at the four-year institution and relegating all aspects of vocational-technical education to the Community College System. The problem is not so much one of program, but creating a situation where professional staff are not available or interested in devoting time and effort to some of the many aspects of research needed in vocational-technical education; nor have funds been programmed for such undertakings. This is in contrast to research activity related to vocational-technical education being reported by a great number of the institutions of higher education across the nation.

V. CONCLUSIONS

The establishment of the Hawaii Research Coordinating Unit for Vocational Education proved to be an important adjunct to vocational education in the State of Hawaii. The Unit received good support and cooperation from all contact sources; and teachers, administrative staff and related agencies are using the resources and services developed.

The Unit engaged in a wide range of activities in an effort to accomplish stated purposes. These objectives, for the most part, were met. The degree to which these objectives were accomplished is reported in the proceeding sections of this report. In self-assessment, the Unit staff is pleased with the outcome. There has been an increased interest in the involvement of research and related activities in the decision-making process.

It is important to note accomplishments of the Unit in contributing to progress toward the use of research and related activity in the solution of vocational education problems in the State of Hawaii. These are reported as follows:

1. Teaching staff have become interested and involved in descriptive surveys and other action research activities contributing to change and innovation in vocational-technical education. Although initial activity is limited, the effect is expected to be catalytic.

2. A system has been established whereby interested individuals with limited experience in professional research, but whose positions would make their participation in vocational research valuable, can become engaged in research under the guidance of professional project monitors.

3. A limited library of research reports and other literature related to vocational-technical education has been established and is available to graduate students, governmental agencies and other interested individuals. This information previously had not been available.

4. Legislation providing funds for research related specifically to vocational-technical education was introduced at the last session of the State Legislature.

5. Research related to vocational-technical education completed within the State has been identified and compiled in an annotated bibliography.

6. A state-wide conference involving legislators, educators, business leaders, labor and governmental agencies was conducted for the specific purpose of identifying problems related to vocational-technical education and manpower.

7. A course in the principles and techniques of research for vocational-technical educators was programmed at the University of Hawaii.

8. Local vocational educators have become identified with a national system of RCUs precluding isolation and provincialism. Research reports, innovative programs, and other related information generated is currently available in Hawaii.

9. Local vocational educators and administrators have become oriented and knowledgeable as to the national concerns and implications for vocational-technical education and manpower development by attendance at regional and national conferences concerned with research.

10. Nationally known consultants in the field of vocational-technical education and research have personally contributed to innovation and program development in Hawaii.

Established an RCU/ERIC linkage. A standing order is in effect for the monthly issue of ERIC documents in microfiche, and a system of "user service" has been established.

University staff in the College of Education, University of Hawaii, has contributed staff time in providing service to the RCU and has initiated several research projects related to vocational education.

In spite of accomplishments, disturbing to the Unit staff has been the scant evidence of the Unit having an impact as a "change agent" on vocational education programs in the State. However, as revealed in Section IV., Discussion, the Unit was handicapped by certain negative factors existing within the State, preventing the Unit from reaching its fullest potential. Foremost of these was the lack of funds available to support research and related projects at the local level.

Nonetheless, the Unit demonstrated the value in the use of a research approach to the solution of problems in vocational education, and framers of the new State Plan for Vocational Education included the Hawaii RCU as an integral part of the program of operations.

VI. RECOMMENDATIONS

The foregoing discussion and report of activities and accomplishments of the Hawaii Research Coordinating Unit for Vocational Education suggest emphasis needed to increase the effectiveness of the Unit.

Recommendation 1.[1]

High priority should be given to the continuation of the RCU under State Administration under Part C of P. L. 90-576 and that substantial state funds be allocated to support research training programs; experimental, developmental, or pilot program; and dissemination of information derived from research.

Recommendation 2.

State funds should be made available to provide for an RCU staff which is adequate to accomplish the objectives established by the RCU.

Recommendation 3.

Policy regarding involvement and support of graduate assistants in RCU operations as outlined in the State Plan should be clarified.[2]

Recommendation 4.

New and improved channels of dissemination of information and materials need to be developed to improve the useability of ERIC documents and other materials presently stored in the RCU library. There is a definite need for equipment to improve useability.

Recommendation 5.

The state office for vocational education must make clear to the RCU specifically and exactly what funds are available for RCU operations during the funding period. Provisions for the use of funds allotted to the state by U.S.O.E. for purposes of Part C of the Act must be established.

Recommendation 6.

Further clarification should be made of what Department of Education personnel, the University of Hawaii, the Department of Labor and related agencies can contribute or the functions they can most effectively perform in a constructive research program in vocational education in the State of Hawaii.

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[1]The Hawaii State Plan for Vocational Education provides for the RCU and a program of activities. The transition from U.S.O.E. Grant to State Administration has been accomplished.

[2]See Hawaii State Plan for Vocational Education Section 6.0.

Recommendation 7.

The RCU should institute a multi-level information center equipped with access to national document collection and research tools. The center should be designated to respond to requests for data on school systems by local educators and administrators.

Recommendation 8.

Local educational agency personnel should be involved in workshops, in-service training programs, and other activities to upgrade their proficiency in research technology and in their ability to consume results of research studies.

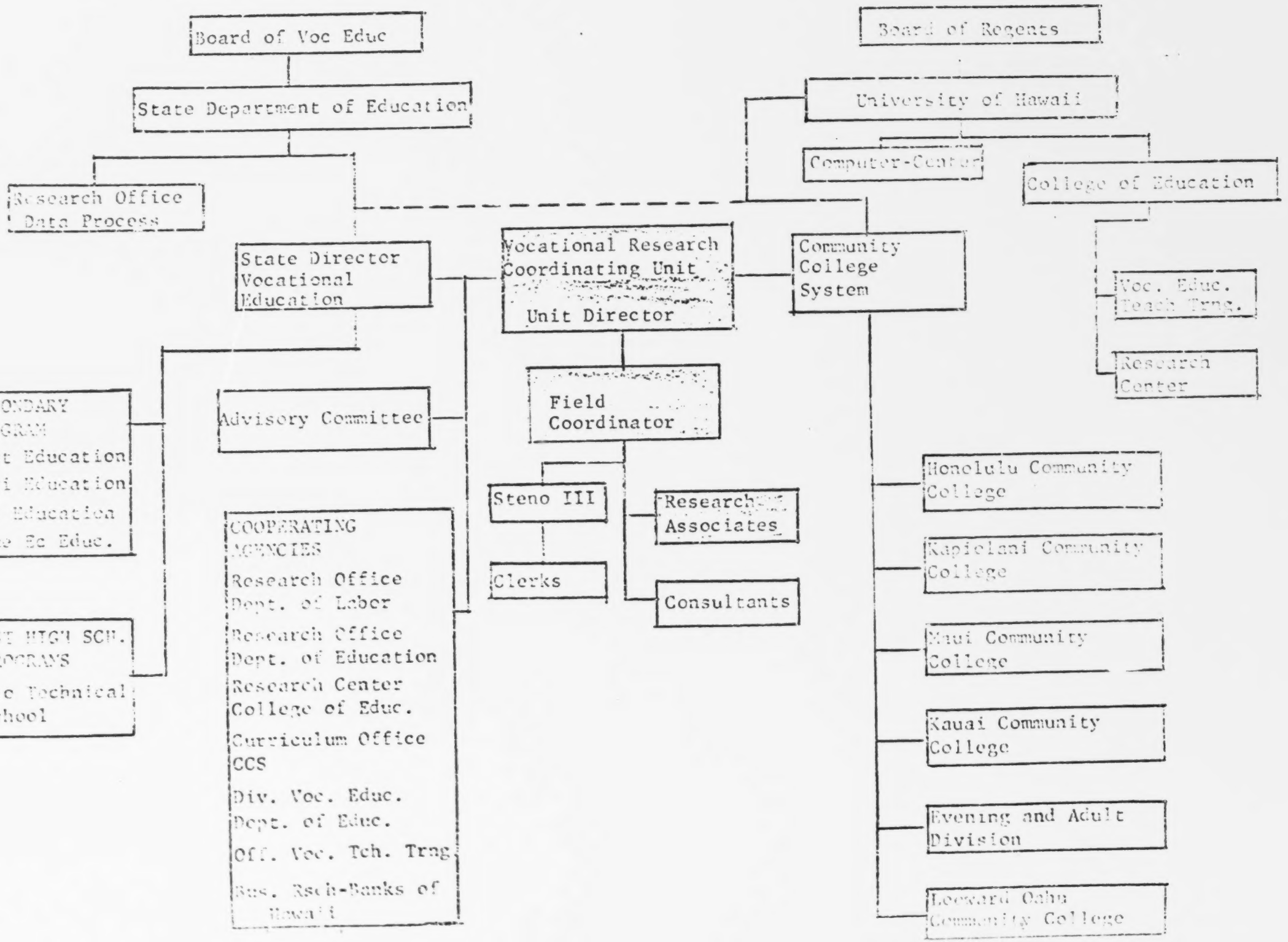
Recommendation 9.

The advisory committee should be re-established to recommend priorities for research project funding. The committee should be composed of representatives of business and industry, professional vocational-technical teachers, representatives of other state agencies concerned with vocational-technical education and others.

APPENDICES

APPENDIX A

ORGANIZATION CHART

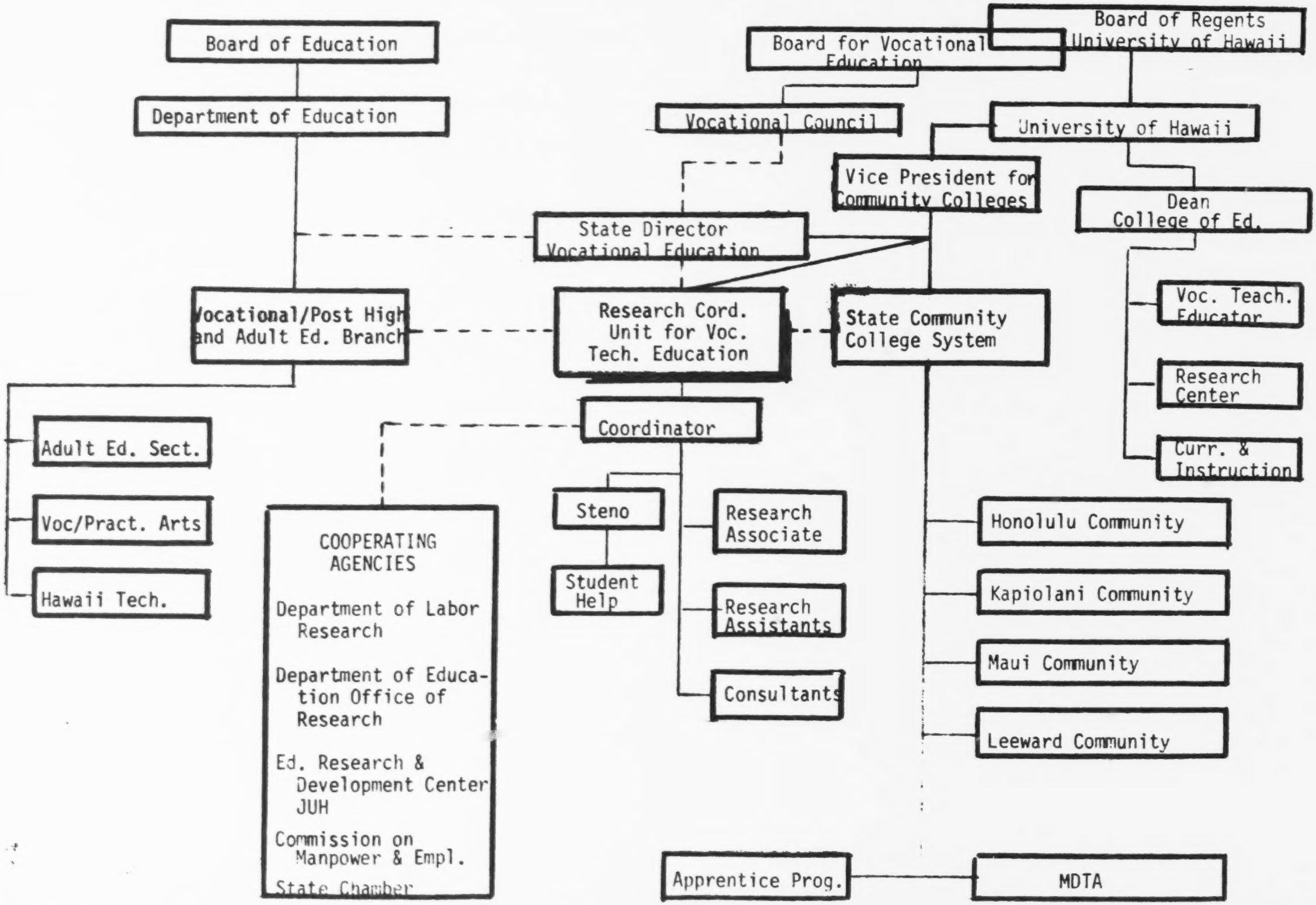


State of Hawaii

APPENDIX B

LOCATION RCU IN RELATION TO THE ORGANIZATION
OF VOCATIONAL TECHNICAL EDUCATION IN THE STATE

Draft DRL
8/7/68



APPENDIX C

Staff Summary

Name	Title or Function	Funds Federal	Funds Local	Period Employed	Percent of Time
Dr. Donald Bridgeman	RCU Director		X	10-1-66 to 11-30-66	25%
Dr. Richard Kosaki	RCU Director		X	11-30-66 to 8-30-69	5%
David R. Lynn	RCU Coordinator	X		Entire Grant	100%
Dr. Donald Aten	Research Associate	X		2-1-67 to 6-30-67	10%
Edwin Ichiriu	Research Assistant	X		2-16-67 to 5-31-67	25%
John Nothom	Research Assistant	X	X	3-1-68 to 6-30-68	100%
Dr. Lawrence Zane	Research Assistant	X		2-1-68 to 6-30-68	50%
Samson Shigetomi	Research Assistant	X	X	7-15-67 to 6-10-68	50%
John Rantala	Research Assistant		X	1-1-69 to 8-30-69	100%
Caroll Dodd	Research Assistant	X		2-1-67 to 7-31-67	50%
Richard Costa	Research Assistant	X		9-1-68 to 7-31-69	50%
Janet Ishikawa	Research Assistant		X	3-21-69 to 6-30-69	100%
Jane Harris	Research Assistant	X		3-10-68 to 4-4-68	5%
Francis Kakazu	Stenographer	X		9-29-69 to	100%

APPENDIX C Cont'd.

Staff Summary

Name	Title or Function	Funds Federal / Local	Period Employed	Percent of Time
Grace Chang	Stenographer	X	9-9-68 to 5-19-69	100%
Linda Nakamoto	Stenographer	X	5-19-69 to 8-30-69	100%
Student Help--	Clerical			
Claire Hansen		X		
Barbara Nishimura		X	Intermittent clerical	
Eloise Izumoto		X	assistant - entire	
Bessie Nakamura		X	grant period	
Sharon Kido		X		

APPENDIX D

HAWAII RESEARCH COORDINATING UNIT
STEERING COMMITTEE[1]

Mr. Donald G. Aten	Education Research and Development Center College of Education University of Hawaii
Mr. Donald C. Bridgman	Director of Curriculum Community College System University of Hawaii
Mr. Albert J. Feirer	Director Division of Vocational, Post-High and Adult Education Department of Education
Mr. Ronald L. Johnson	Staff Specialist Office of Research, Statistics and Data Processing Department of Education
Dr. Richard H. Kosaki	Vice President for Community Colleges University of Hawaii
Mr. David R. Lynn	Coordinator Hawaii Research Coordinating Unit Community College System University of Hawaii
Mr. Theodore F. Ruhig	Executive Secretary State Commission on Manpower and Full Employment
Mr. Herbert S. Watanabe	Staff Specialist Business and Facilities Office of District Superintendent
Mr. Teruo Yoshida	Chief Research and Statistics Office Department of Labor and Industrial Relations

[1]Steering Committee effective October 1966 through September 1967.

APPENDIX E

HAWAII RESEARCH COORDINATING UNIT[1]
ADVISORY COMMITTEE

Angelo C. Gillie[2]	Coordinator Technical-Vocational Programs Community College System
T. Antoinette Ryan	Professor/Researcher Educational Research and Development Center University of Hawaii
R. W. Lorenzen	Vocational Teacher Trainer Community College System
Theodore F. Ruhig	Executive Secretary State Commission on Manpower and Full Employment
Janet S. Ishikawa	Department Chairman Kapiolani Community College
John Rantala[3]	Program Specialist Vocational-Technical Education Community College System

David R. Lynn, Coordinator
Hawaii Research Coordinating Unit
Community College System
University of Hawaii

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[1]Committee effective October 23, 1968 through August 31, 1969.

[2]Angelo Gillie terminated on April 1969.

[3]John Rantala was appointed to the committee on January 1969.

APPENDIX F

Section III ACTIVITIES[1]

The establishment of a State Vocational Education Coordinating Unit will provide leadership and/or coordination in specific activities such as the following:

1. Identification of issues and problems relating to the nature and place of vocational education in the State school system.

2. Establishment of an advisory committee to effect a cooperative effort in research between educators, business, labor, State Employment Service, State Department of Education, University of Hawaii, and the Community College System.

3. Development of long-range and short-range plans in regard to needed research.

4. Stimulation of activities which will result in pre-service and in-service training programs for researchers in vocational education.

5. Location of and assistance to promising researchers to assist in identifying areas of research in vocational and technical education and in conducting studies.

6. Development of proposals relating to training institutes in the following fields:

   a. Workshops for administrators and faculty.

   b. Teacher institutes in new occupations.

   c. Institutes in curriculum development.

   d. Institutes regarding the preparations of occupational teachers.

7. Accomplishment of studies relating to determination of the numbers, qualifications, and sources of people needed to meet staffing requirements of projected vocational programs.

8. Establishment of a state-wide organization to coordinate the combined research efforts in the area of vocational and technical education.

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[1] From original project proposal.

APPENDIX F Cont'd.

Section III ACTIVITIES

9. Determination of areas of needed research, guidelines for proposal development.

10. Provision of a means of monitoring research and developmental projects supported by Federal or State funds.

APPENDIX G

RESEARCH BY RELATED AND COOPERATING AGENCIES

1. Dropout! - Robert P. Dye/Theodore F. Ruhig/Iwrin I. Tanaka, November 1968.

2. Community College Program Structure and Facilities Implication - Donald Leton, 1969.

3. A Special Manpower Report - Theodore F. Ruhig.

4. An Evaluation Report of a Follow-Up Study - Nelson Muraoka, 1969.

5. 1967-68 Hawaii High School Senior Service - Marcia Boyer, 1968.

6. A Model Research Process - T. Antoinette Ryan, 1969.

7. Evaluation of Vocational-Technical Education and Training - T. Antoinette Ryan, 1967.

8. Community College Program Structure and Facilities Implication - Donald Leton, 1967.

APPENDIX H

SUMMARY OF RCU RESEARCH PROJECTS

1. Development of Single Concept 8 mm Film Loops.

2. Profile Study of Industrial Education Teachers in the State of Hawaii.

3. Concepts of Career Fields Held by 11th Grade Students.

4. Aptitude Characteristics of Students in Community College Vocational Curricula.

5. Training Activities Within Business-Industry: Implications for Public Education in Hawaii.

6. A Research Model to Identify Mathmatical Tasks Performed by a Representative Sample of Bookkeepers and Account Clerks in Honolulu Business Firms.

APPENDIX I

List of Publications and Releases by the RCU

Information Release - Hawaii RCU

1. Bibliography No. 1 - March 1967.
2. Bibliography No. 2 - June 1967.
3. Bibliography No. 3 - December 1968.
4. Bibliography No. 4 - August 1969.

Information Release - Hawaii RCU

1. An Outline Proposal of Study of Vocational and Technical Education in Pennsylvania - December 1967.
2. Annotated Bibliography of Selected Vocational Research and Related Materials - February 1968.
3. Lesson Outline: Familiarization with ERIC and Its Publications - April 1968.

Quarterly Technical Progress Report

1. First Quarterly Report - February 1966.
2. Second Quarterly Report - December 1966.
3. Third Quarterly Report - March 1967.
4. Fourth Quarterly Report - June 1967.
5. Fifth Quarterly Report - September 1967.
6. Sixth Quarterly Report - December 1967.
7. Seventh Quarterly Report - March 1968.
8. Eighth Quarterly Report - June 1968.
9. Ninth Quarterly Report - September 1968.
10. Tenth Quarterly Report - December 1968.
11. Eleventh Quarterly Report - June 1969.
12. Twelfth Quarterly Report--Final Report - September 1969.
13. INTERIM REPORT - September 1968.

Publications

1. Educational Activities Within Business-Industry: Implications for Public Education - David R. Lynn/John W. Nothom, January 1968.

2. Teacher Development of Super 8 mm Single Concept Film Loops: A Procedural Plan - Kenneth T. Okano, February 1968.

3. Research Problems in Manpower and Vocational Education - Theodore F. Ruhig/David R. Lynn, May 1967.

4. Survey of Occupational and Certain Related Educators in the State of Hawaii - Madelyn S. D'Enbeau/Marvin Poyzer, 1968.

5. A Research Model to Identify Mathematical Tasks Performed by a Representative Sample of Bookkeepers and Account Clerks in Honolulu Business Firms - Janet Ishikawa, June 1969.

6. A Survey to Identify Clusters of Office Tasks Performed by Selected Secretaries in Honolulu Offices and Its Implications for Improving Business Education - Elena M. Bumanglag, May 1969.

7. Concepts of Career Fields Held by Eleventh Grade Students - Donald A. Leton/Carol S. Dodd, 1968.

8. Aptitude Characteristics of Students in Community College Vocational Curricula - Donald Leton/Richard A. Costa.

APPENDIX J

LIST OF PARTICIPANTS

State Commission on Manpower and Full Employment

Esme Chu
State Commission on Manpower and Full Employment

John Jaquette
Hawaiian Telephone Company

Curtin A. Leser
Hawaiian Electric Company

James Misajon
Peace Corps, University of Hawaii

Dorothy Rish
California Packing Corporation

Theodore Ruhig
State Commission on Manpower and Full Employment

Bernard Stern
Consultant

David Thompson
ILWU, Local 142

State Legislature

Eureka Forbes
Senator - Oahu

John Hulten
Senator - Oahu

Robert S. Taira
Representative - Oahu

Nadao Yoshinaga
Senator - Oahu

University of Hawaii

Donald Aten
Education Research and Development Center

Cynthia Barnes
School of Nursing

Donald Bridgman
Maui Community College

Richard H. Kosaki
Community College System

Donald Leton
Education Research and Development Center

David R. Lynn
Hawaii Research Coordinating Unit

H. Roy McArdle
University Placement Office

Harriet Nakamoto
Kapiolani Community College

John Nothom
Community College System

Marvin F. Poyzer
College of Education

Raymond Won
Kapiolani Community College

Douglas Yamamura
Sociology Department
Social Science Research Institute

Department of Education

Richard E. Ando
Board of Education

Albert Feirer
Vocational, Post-High &
Adult Education

Amy Kudo
Home Economics Education

Robert Loveless
Board of Education

C. Richard MacNair
Instructional Services

Richard Mizuta
Manpower Development &
Training

William Savard
Office of Research, Statistics
and Data Processing

Lawrence Zane
Industrial Arts Education

Other Government Agencies

Joy Ahn
Representative Mink's Office

Edith Doi
Office of Economic Opportunity

John Farias
County of Hawaii

Howard B. Gundersen
Bureau of Adult & Vocational
Education, H. E. W.,
San Francisco Office

Robert Hasegawa
Department of Labor &
Industrial Relations

Sidney High
Division of Adult & Vocational
Research, Office of Education,
Washington, D. C.

Clarence Hodge
Department of Planning &
Economic Development

Wilbur Hurt
Economic Development Division

William S. Johnson
State Economist

Richard Kibe
County of Maui

Sybil Kyi
Department of Labor &
Industrial Relations

Walter Quisenberry
Department of Health

Sam Tanimoto
Advisory Council for
Vocational Education

Burt Tsuchiya
County of Kauai

Teruo Yoshida
Department of Labor &
Industrial Relations

Others

Grant Canfield
Hawaii Employers Council

Sidney Fine
W. E. Upjohn Institute for
Employment Research

Russell Geib
Honolulu Chamber of Commerce

Richard T. Hashimoto
Sheraton Hawaii Corporation

Wesley H. Hillendahl
Bank of Hawaii

Robert C. Knight
Hawaii State Federation of Labor

Charles Luttrell
Hawaii Congress PTA

Kim Seixas
Rehab Center of Hawaii

Si-si Stamper
First National Bank of Hawaii

Henry Thompson
Rehab Center of Hawaii

APPENDIX K

PROPOSAL SUBMITTED FOR FEDERAL, LOCAL, AND RELATED FUNDS
TO SUPPORT VOCATIONAL EDUCATION PROJECTS

A. Proposals Submitted to Region IX

1. Individualizing the Instruction of Learning of Business Mathematics in a Community College.

   Janet Ishikawa — Not Approved

B. Proposals Submitted to the U. S. Office of Education, Bureau of Education Personnel Development Educational Professions Development Act

1. Curriculum Planning Development for Post Secondary Occupational Instructors-Part D.

   Dr. Lawrence Zane — Not Approved

2. A Graduate Fellowship Program for Prospective Community College Instructors-Part E.

   Dr. Lawrence Zane — Approved

C. Proposals Submitted to the Hawaii RCU for "in-house" Funding

1. Occupational Survey of the Aircraft Industry.

   Herbert Halberg (Not Completed) — Approved

2. Public Relations Program to Assist in Career Orientation for Occupational Programs in a Community College.

   George Sano — Not Approved

3. Trial and Attitude Survey Concerning Instructional Materials for Vocational Education in a Community College.

   William Wiley — Not Approved

4. Concepts of Career Fields Held by Eleventh Grade Students

   Dr. Donald Leton and Carol Dodd — Approved

5. A Procedural Plan: Teacher Development of 8 mm Single Concept Film Loops

   Kenneth Okano — Approved

6. A Survey of Occupational and Certain Related Educators in Hawaii.

   M. D'Enbeau — Approved

7. Drop-outs in Vocational Education at the Honolulu Community College.

   Charles Mast — Not Approved

8. Attitude Characteristics of Students in Community College Vocational Curricula.

   Dr. Donald Leton and Richard Costa — Approved

9. A Research Model to Identify Mathematical Tasks Performed by a Representative Sample of Bookkeepers and Account Clerks in Honolulu Business Firms.

   Janet Ishikawa — Approved

APPENDIX L

COPY

(To be made one and eight copies)
FOURTH LEGISLATURE, 196 7
STATE OF HAWAII

S.B. NO. 1148

A BILL FOR AN ACT

MAKING AN APPROPRIATION FOR RESEARCH, TRAINING, PILOT AND DEMONSTRATION PROJECTS AND PROGRAM DEVELOPMENT RELATED TO VOCATIONAL-TECHNICAL EDUCATION.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF HAWAII:

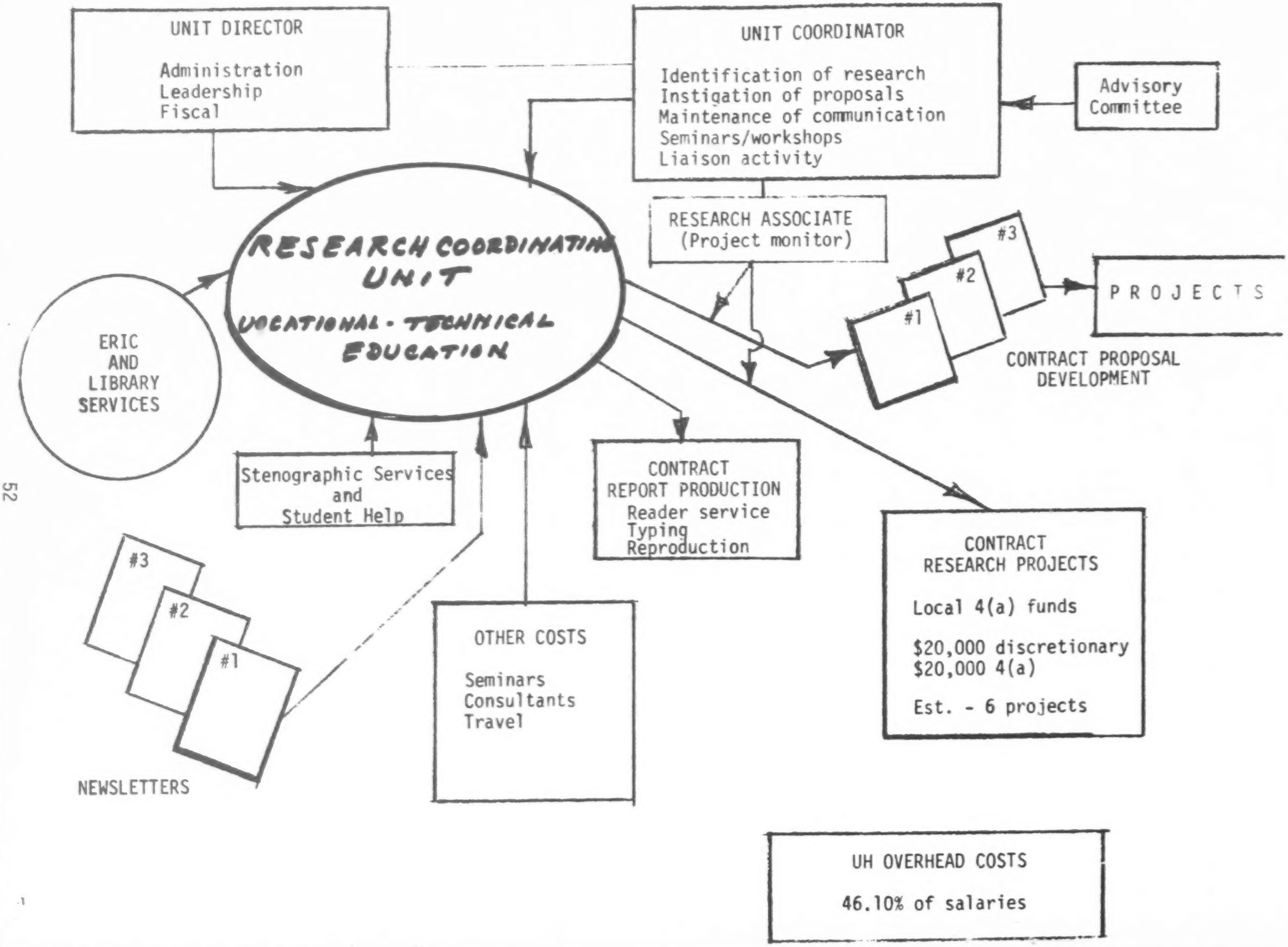
Section 1 There is hereby appropriated out of the general revenues of the State of Hawaii, not otherwise appropriated, the sum of $50,000, or so much thereof as may be necessary, for research, training, pilot and demonstration projects and program development related to vocational-technical education.

SECTION 2. The sum hereby appropriated shall be expended for the purposes herein specified by the Hawaii Vocational Education Research Coordinating Unit, Community College System, University of Hawaii.

SECTION 3. This Act shall take effect upon its approval.

INTRODUCED BY: Eureka Forbes

4/17/67


UNIT DIRECTOR
Administration
Leadership
Fiscal
UNIT COORDINATOR
Identification of research
Instigation of proposals
Maintenance of communication
Seminars/workshops
Liaison activity
Advisory Committee
RESEARCH COORDINATING UNIT
VOCATIONAL - TECHNICAL EDUCATION
RESEARCH ASSOCIATE
(Project monitor)
#3
#2
#1
PROJECTS
CONTRACT PROPOSAL DEVELOPMENT
ERIC AND LIBRARY SERVICES
Stenographic Services and Student Help
CONTRACT REPORT PRODUCTION
Reader service
Typing
Reproduction
CONTRACT RESEARCH PROJECTS
Local 4(a) funds
$20,000 discretionary
$20,000 4(a)
Est. - 6 projects
#3
#2
#1
NEWSLETTERS
OTHER COSTS
Seminars
Consultants
Travel
UH OVERHEAD COSTS
46.10% of salaries

APPENDIX N

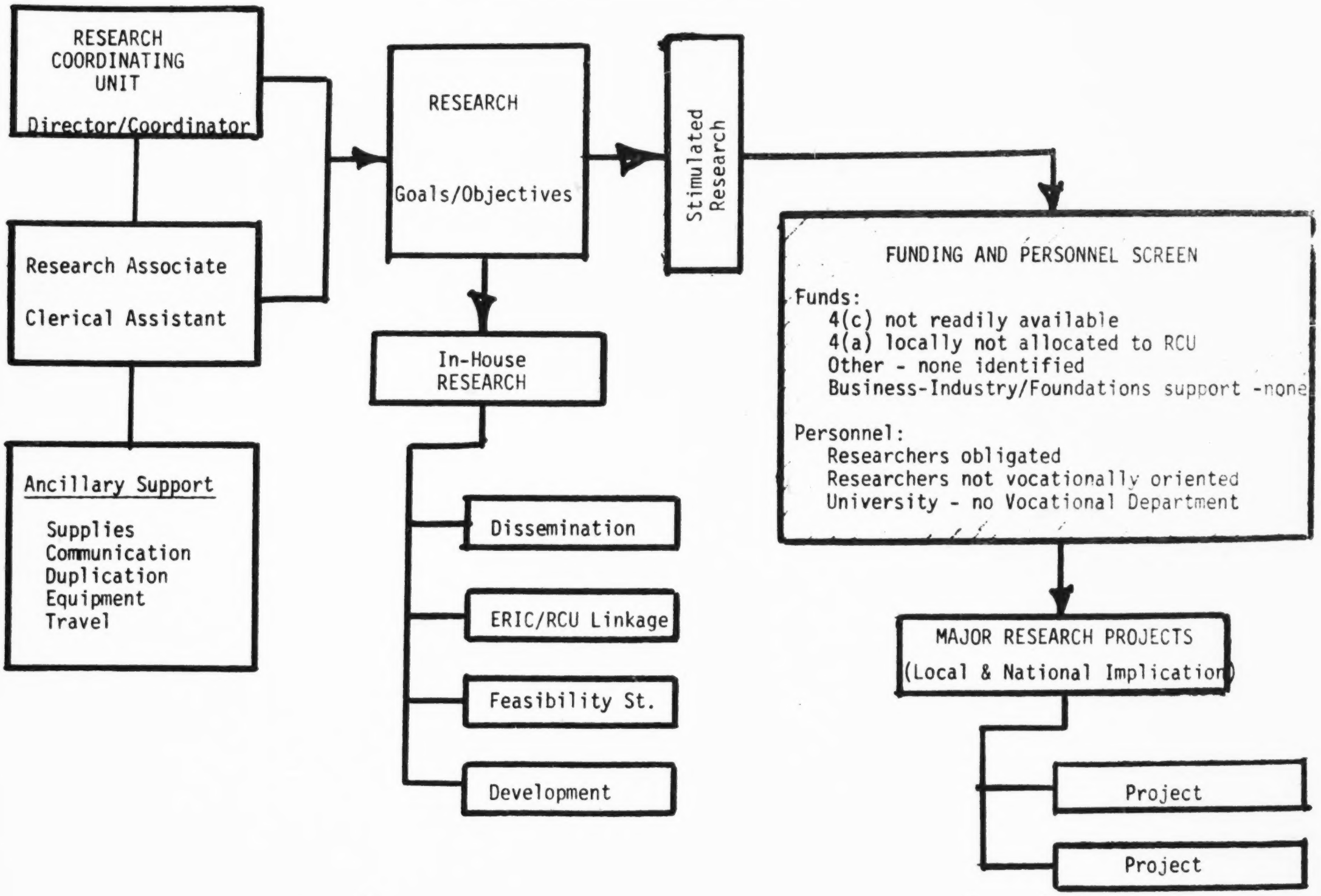
List of Equipment Purchased

TOTAL COST OF EQUIPMENT - $3,148.71

1. Two Desks.
2. Two Executive Chairs.
3. Two 4-drawer File Cabinets.
4. Three Storage Cabinets.
5. Two Royal Typewriters (standard).
6. Two IBM Typewriters (selectric and standard).
7. One typewriter stand.
8. Addressograph - hand operated.

APPENDIX O
RESEARCH COORDINATING UNIT
FOR
VOCATIONAL AND TECHNICAL EDUCATION

PATTERNS OF RESEARCH IMPLEMENTATION



UNIVERSITY OF HAWAII / HONOLULU, HAWAII 96822

COMMUNITY COLLEGE SYSTEM

in cooperation with

State Division of Vocational Post High School and Adult Education

ANNOUNCES establishment of a

VOCATIONAL-TECHNICAL EDUCATION RESEARCH COORDINATING UNIT

HAWAII'S RCU

A staff of professionals in vocational-technical education and research; one of 44 state units supported through the Vocational Education Act of 1963.

An agency to stimulate research designed to improve existing programs in vocational-technical education and to develop new programs to meet changing needs.

A source of information about current research in vocational-technical education.

RCU ACTIVITIES

Bridges the gap between the schools, where the impact of vocational-technical education problems are felt, and the researchers, who are seeking ways of coping with these problems.

Coordinates research activities by serving as a "clearing house" to avoid duplication of effort.

Works to identify research and development needs in the State's vocational-technical education programs.

ROLE OF THE HAWAII RCU

To foster research designed to improve vocational-technical education programs to help to prepare our population, both youth and adults, to find and maintain satisfying jobs in a rapidly changing technology.
To guide research efforts into areas of greatest needs, and coordinating them for efficiency, to contribute to progress in effective vocational-technical education programs.

RCU SERVICES

Assistance to individuals who want to engage in vocational-technical education research by

(1) suggesting problem areas
(2) helping to design proposals
(3) providing information about related research
(4) advising about funding

Dissemination of research information by issuing newsletters and other publications.

FOR FURTHER INFORMATION CONTACT

Vocational-Technical Education Research Coordinating Unit
Community College System
2327 Dole Street
Honolulu, Hawaii 96822
Telephone — 944-8600